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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,079	01/24/2007	Gerhard Schwenk	SCHW3006/JEK	8639
23364 7590 09/06/2011 BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314-1176				
EXAMINER				
LEWIS, JUSTIN V				
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3725				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/575,079

**Applicant(s)**

SCHWENK ET AL.

**Examiner**

JUSTIN LEWIS

**Art Unit**

3725

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 July 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 5) ☒ Claim(s) 1,3-7,9-30 and 32-34 is/are pending in the application.
- 5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 1,3-7,9-30 and 32-34 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☒ The drawing(s) filed on 07 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-SB-005)  
Paper No(s)/Mail Date \_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 13 July 2010 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 6-7, 10-11, 15-16, 21-23 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,259,907 to Soules et al. ("Soules") in view of U.S. Patent No. 4,407,525 to Hoppe ("Hoppe") and further in view of U.S. Patent No. 4,451,530 to Kaule et al. ("Kaule '530") and U.S. Patent No. 455,039 to Weitzen et al. ("Weitzen").

Regarding claim 1, Soules discloses a value document, comprising a value document substrate (see col. 11, lines 16-21) and a feature substance (intermediate layer 72) for enabling checking of the authenticity of the value document (note that as drafted, the instant limitation is in the form of a statement of intended use, and as such, will not be afforded patentable weight), said feature substance (intermediate layer 72) being incorporated into the volume and substance of the substrate of the value document (see fig. 7), wherein said substance comprises a mixture of luminescent substances having a complex spectral distribution (see col. 11, lines 11-15), said complex spectral distribution providing by its spectral characteristics a coding (see col. 11, lines 16-21), but fails to disclose: i) said feature substance being distributed uniformly throughout the volume and substance of the substrate; ii) said feature substance providing a coding by the form of the emission and/or excitation spectra of the mixture; and iii) a second feature substance that is formed by a luminescent substance which is provided on the value document substrate in the form of a coding, said coding also enabling value recognition of the document.

Hoppe teaches the concept of distributing a feature substance uniformly throughout the volume and substance of a substrate (see claim 2, providing a substrate layer having a substantially uniform coloring disposed throughout).

Kaule '530 teaches the concept of utilizing a feature substance that provides a coding by the form of the emission and/or excitation spectra of its mixture (see abstract, providing that the change generated by the technology used in an emission or excitation spectra is utilized in conjunction with a security paper).

Weitzen teaches the concept of providing a second feature substance (coating in the form of bands 3, 4 and 5) that is formed by a luminescent substance which is provided on the value document substrate (see col. 1, lines 31-35) in the form of a coding (see col. 1, lines 37-38), said coding also enabling value recognition of the document (see col. 3, lines 58-61).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to apply the Hoppe uniform distribution teachings to the Soules intermediate layer, disposing said element throughout the substrate, in order to permit the inclusion of a security feature on both the front and back sides of the substrate layer, as explicitly taught by Hoppe (see col. 1, lines 40-43).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the Kaule '530 excitation/emission spectra system teachings in conjunction with (and applied to) the Soules intermediate layer in order to increase the number of luminescence features which are suitable for automatic authenticity testing and which can be differentiated from one another.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to place the Weitzen coating upon the Soules value document as desired during its production, in order to render the document more difficult to counterfeit, as explicitly taught by Weitzen (see col. 1, lines 31-33).

Regarding claim 6, Soules in view of Hoppe and further in view of Kaule '530 and Weitzen discloses the value document according to claim 1, wherein the coding of the second feature substance extends over a predominant part of a surface of the value document (see Weitzen fig. 1).

Regarding claim 7, Soules in view of Hoppe and further in view of Kaule '530 and Weitzen discloses the value document according to claim 1, wherein the coding provided by the second feature substance is a bar code (see Weitzen col. 1, lines 37-38).

Regarding claim 10, Soules in view of Hoppe and further in view of Kaule '530 and Weitzen discloses the value document according to claim 1, wherein the value document substrate comprises a printed or unprinted plastic film (see Soules col. 15, lines 17-19).

Regarding claim 11, Soules in view of Hoppe and further in view of Kaule '530 and Weitzen discloses the value document according to claim 1, wherein the second feature substance is printed on the value document substrate (see Weitzen col. 1, lines 31-35).

Regarding claim 15, Soules in view of Hoppe and further in view of Kaule '530 and Weitzen discloses a method for producing a value document according to claim 1,

comprising the steps: i) incorporating the first feature substance distributed uniformly throughout the volume and substance of the value document substrate (see the combination set forth in the rejection of claim 1, above); and ii) applying the second feature substance to the value document substrate in the form of a coding (see Weitzen col. 1, lines 37-39).

Regarding claim 16, Soules in view of Hoppe and further in view of Kaule '530 and Weitzen discloses the production method according to claim 15, wherein the second feature substance is printed on the value document substrate (see Weitzen col. 1, lines 31-35).

Regarding claim 21, Soules, as modified by Hoppe, Kaule '530 and Weitzen (in the manner set forth in the rejection of claim 1, above), discloses a method for checking or processing a value document according to claim 1, comprising the steps: checking the authenticity and value of the value document by checking the authenticity of the value document by using a coding obtained by at least one spectral characteristic property in the form of the emission and/or excitation spectra of either or both the first feature substance and the luminescent substance of the second feature substance (see the combination set forth in the rejection of claim 1, above; also see Soules abstract), and using the coding formed by the luminescent substance of the second feature substance for carrying out value recognition of the value document (see Weitzen col. 11, lines 2-5).

Regarding claim 22, Soules in view of Hoppe and further in view of Kaule '530 and Weitzen discloses the method according to claim 21, wherein at least one spectral

characteristic property of the first feature substance is used for checking the authenticity of the value document, and the coding provided by the first feature substance is used for the value recognition of the value document, by a user of a first user group (see the combination set forth in the rejection of claim 1, above; note that if the document proves to lack authenticity, it is of no value).

Regarding claim 23, Soules in view of Hoppe and further in view of Kaule '530 and Weitzen discloses the method according to claim 22, wherein at least one spectral characteristic property of the luminescent substance of the second feature substance is used for checking the authenticity of the value document (note that the absence of a Soules bar code could serve as an indicator of lack of authenticity), and the coding formed by the luminescent substance of the second feature substance is used for the value recognition of the value document, by a user of a second user group (see Weitzen col. 3, lines 58-61).

Regarding claim 30, Soules in view of Hoppe and further in view of Kaule '530 and Weitzen discloses the value document according to claim 6, wherein the coding extends over substantially the total surface of the value document (see Weitzen fig. 1).

5. Claims 3-5, 13-14, 18-20, 24-29 and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soules in view of Hoppe and further in view of Kaule '530, Weitzen and U.S. Patent No. 6,506,476 to Kaule et al. ("Kaule '476").

Regarding claim 3, Soules in view of Hoppe and further in view of Kaule '530 and Weitzen discloses the value document according to claim 1, but fails to disclose a third



feature substance being provided on the value document substrate, which is different from the first and second feature substances.

Kaule '476 teaches the concept of providing a third feature substance (luminescent substance 6) on a value document substrate (see fig. 3), said third feature substance being different from the aforementioned first and second feature substances (note that the Kaule '476 element is indeed different from those taught by the other references cited above).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to dispose the Kaule '476 luminescent substance upon the value document of Soules in view of Weitzen either separately or along with the mixture of the first and second substances, in order to provide another authentication feature, as explicitly taught by Kaule '476 (see col. 1, lines 5-8).

Regarding claim 4, Soules in view of Hoppe and further in view of Kaule '530, Weitzen and Kaule '476 discloses the value document according to claim 3, wherein one of the third feature substance is formed by at least one of a luminescent substance and a mixture of luminescent substances (see Kaule '476 col. 1, lines 5-8).

Regarding claim 5, Soules in view of Hoppe and further in view of Kaule '530, Weitzen and Kaule '476 discloses the value document according to claim 1, wherein at least one of the feature substances is formed on the basis of a host lattice doped with rare earth elements (see Kaule '476 col. 1, lines 5-8).

Regarding claim 13, Soules in view of Hoppe and further in view of Kaule '530, Weitzen and Kaule '476 discloses the value document according to claim 3, wherein the

third feature substance is provided on the value document substrate in the form of a coding (see Kaule '476 col. 3, lines 32-34).

Regarding claim 14, Soules in view of Hoppe and further in view of Kaule '530, and Weitzen, as modified by Kaule '476 (in the manner set forth in the rejection of claim 3, above), discloses the value document according to claim 1, wherein the third feature substance is printed on the value document substrate together with a printing ink in the form of a printed image (see Kaule '476 col. 3, lines 14-18; see also col. 3, lines 32-34).

Regarding claim 18, Soules in view of Hoppe and further in view of Kaule '530, and Weitzen, as modified by Kaule '476 (in the manner set forth in the rejection of claim 3, above), discloses the production method according to claim 15, wherein a third feature substances is applied to the value document substrate (see the combination set forth in the rejection of claim 3, above).

Regarding claim 19, Soules in view of Hoppe and further in view of Kaule '530, Weitzen and Kaule '476 discloses the production method according to claim 18, wherein the second and third feature substances are applied to the value document substrate as a mixture (see the combination set forth in the rejection of claim 3, above).

Regarding claim 20, Soules in view of Hoppe and further in view of Kaule '530, Weitzen and Kaule '476 discloses the production method according to claim 18, wherein the third feature substance is printed on the value document substrate together with a printing ink in the form of a printed image (see Kaule '476 col. 3, lines 14-18; see also col. 3, lines 32-34).

Regarding claim 24, Soules in view of Hoppe and further in view of Kaule '530 and Weitzen, as modified by Kaule '476 (in the manner set forth in the rejection of claim 3, above), discloses the method according to claim 23, wherein at least one spectral characteristic property of at least one of the first and third feature substance that is different from the first and second feature substance is used for checking the authenticity of the value document (see the combination set forth in the rejection of claim 1, above), and the coding formed by the first feature substance is used for the value recognition of the value document (see Soules abstract), if the user belongs to the first user group, and at least one spectral characteristic property of the second feature substance (the particular luminescence of the Weitzen substance) is used for checking the authenticity of the value document, and the coding formed by the second feature substance is used for the value recognition of the value document, if the user belongs to the second user group (see Weitzen col. 3, lines 58-61).

Regarding claim 25, Soules in view of Hoppe and further in view of Kaule '530, Weitzen and Kaule '476 discloses the method according to claim 24, wherein, for the authenticity check or value recognition by a user of the first user group, the first feature substance is irradiated with radiation from its excitation range, the emission is determined at least one wavelength from the emission range of the first feature substance (note that in order to properly inspect the value document, a user will naturally hold the document at a distance that is greater than one wavelength from the emission range), and the check of at least one of authenticity and the value recognition

is carried out on the basis of the determined emission (see the combination set forth in the rejection of claim 1, above).

Regarding claim 26, Soules in view of Hoppe and further in view of Kaule '530, Weitzen and Kaule '476 discloses the method according to claim 25, wherein for the authenticity check or value recognition by a user of the second user group the second feature substance is irradiated with radiation from its excitation range, the emission is determined at at least one wavelength from the emission range of the second feature substance (note that in order to properly inspect the value document, a user will naturally hold the document at a distance that is greater than one wavelength from the emission range), and the check of at least one of authenticity and the value recognition is carried out on the basis of the determined emission (see the combination set forth in the rejection of claim 1, above).

Regarding claim 27, Soules in view of Hoppe and further in view of Kaule '530, Weitzen and Kaule '476 discloses the method according to claim 26, wherein at least one of the first and second feature substance is irradiated with at least one of visible and infrared radiation (see Soules col. 2, lines 26-30), and the emission of the irradiated feature substance is determined in the infrared spectral range (see Soules col. 2, lines 26-30).

Regarding claim 28, Soules in view of Hoppe and further in view of Kaule '530, Weitzen and Kaule '476 discloses the method according to claim 25, wherein the irradiation is performed with a light-emitting diode or laser diode (see Kaule '476 col. 5, lines 35-39, specifying that various light sources, such as halogen lamps may be used

to inspect encoded value documents; note that per the Merriam-Webster dictionary, a "diode" is "an electronic device that has two terminals"; note further that a halogen lamp is an electronic device that has two terminals; note further that halogen lamps emit light; accordingly, the halogen lamps taught by Kaule are "light-emitting diodes").

Regarding claim 29, Soules in view of Hoppe and further in view of Kaule '530, Weitzen and Kaule '476 discloses the value document according to claim 3, wherein the third feature substance is provided as a printing (see Kaule '476 col. 3, lines 14-18; see also col. 3, lines 32-34).

Regarding claim 32, Soules in view of Hoppe and further in view of Kaule '530, Weitzen and Kaule '476 discloses the value document according to claim 13, wherein the third feature substance is provided as a printing (see Kaule '476 col. 3, lines 14-18; see also col. 3, lines 32-34).

Regarding claim 33, Soules in view of Hoppe and further in view of Kaule '530, Weitzen and Kaule '476 discloses the production method according to claim 18, wherein the third feature substance is applied by printing (see Kaule '476 col. 3, lines 14-18; see also col. 3, lines 32-34).

Regarding claim 34, Soules in view of Hoppe and further in view of Kaule '530, Weitzen and Kaule '476 discloses the production method according to claim 19, wherein the second and third feature substances are applied to the value document substrate as separate substances (see the combination set forth in the rejection of claim 3, above).

6. Claims 9, 12 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soules in view of Hoppe and further in view of Kaule '530, Weitzen and U.S. Patent Application Publication No. 2004/0084277 to Blair ("Blair").

Regarding claim 9, Soules in view of Hoppe and further in view of Kaule '530 and Weitzen discloses the value document according to claim 1, but fails to disclose the value document substrate comprising a printed or unprinted cotton paper.

Blair teaches the concept of providing a value document substrate comprising a printed or unprinted cotton paper (see paragraph 6, lines 6-7).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the Blair cotton pulp in order to make the document of value of Soules in view of Weitzen, in order to give it better durability than commercial papers and a distinctive feel, as explicitly taught by Blair (see paragraph 6, lines 7-9).

Regarding claim 12, Soules in view of Hoppe and further in view of Kaule '530 and Weitzen, as modified by Blair (in the manner set forth in the rejection of claim 9, above), discloses the value document according to claim 1, wherein the substrate is paper formed from a moist paper web during its production (note that the use of the Blair cotton pulp requires that the value document consist of a moist paper web at some point during its production), and the second feature substance is applied to the moist paper web in the form of the coding during papermaking (see the combination set forth in the rejection of claim 9, above).

Regarding claim 17, Soules in view of Hoppe and further in view of Kaule '530 and Weitzen, as modified by Blair (in the manner set forth in the rejection of claim 9,

above), discloses the production method according to claim 15, wherein the value document substrate is formed by a printed or unprinted cotton paper formed from a moist paper web during its production (note that the use of the Blair cotton pulp requires that the value document consist of a moist paper web at some point during its production), and the second feature substance is sprayed onto the moist paper web during papermaking (see the combination set forth in the rejection of claim 9, above).

### ***Response to Arguments***

7. Applicants' arguments regarding the applicability of the previously cited prior art references to the newly amended claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUSTIN LEWIS whose telephone number is (571)270-5052. The examiner can normally be reached on M-F 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dana Ross can be reached on (571) 272-4480. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dana Ross/  
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/JVL/